



National Institute for  
Occupational Safety and Health  
Centers for Disease Control  
and Prevention (CDC)  
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The Honorable Joseph A. Main  
Assistant Secretary of Labor for  
Mine Safety and Health  
U.S. Department of Labor  
1100 Wilson Boulevard  
Arlington, Virginia 22209-3939

April 13, 2012

Dear Mr. Main:

I am writing to inform you about the National Institute for Occupational Safety and Health (NIOSH) Technical Report, *Loss of Start-Up Oxygen in CSE SR-100 Self-Contained Self-Rescuers* [DHHS (NIOSH) Publication No. 2012-139]. The enclosed report describes the results of an investigation of field-deployed CSE Corporation (CSE) SR-100 Self-Contained Self-rescuers (SCSRs) carried out jointly by NIOSH and the Mine Safety and Health Administration (MSHA). The investigation was conducted pursuant to Section IV (1) and (2) of the June 8, 1995 Memorandum of Understanding between NIOSH and MSHA (Federal Register, Vol. 60, No. 110, pp. 30403-30404).

The investigation was designed to test field-deployed CSE SR-100 SCSRs to determine the extent of oxygen cylinder failures in the population of approximately 70,000 units deployed in underground coal mines. NIOSH and MSHA collected and tested the oxygen cylinders from 500 field-deployed units in order to determine if the defect rate among the deployed units was less than 1%. To have 95% confidence that the defect rate was less than 1%, no more than three units in the 500-unit sample could fail the test. Five units failed the test. The findings contained in the Technical Report are consistent with those we reported to you in person at MSHA headquarters on January 9, 2012; namely that the failure rate for the start-up oxygen cylinders exceeded the acceptance criteria. Based on the findings of the investigation, the field-deployed CSE SR-100 units no longer conform to the minimum requirements for certification under 42 CFR Part 84, Subpart E.

Pursuant to Section III (4) of the Memorandum of Understanding between NIOSH and MSHA, NIOSH is formally notifying MSHA of the "discrepancies and nonconformance" identified with the CSE Model SR-100 under NIOSH Certification approval number, TC-13F-0239. In addition to making MSHA aware of the "discrepancies and nonconformance" pertaining to the CSE Model SR-100, NIOSH will also place a copy of the Technical Report on its website ([www.niosh.gov](http://www.niosh.gov)) on April 16, 2012.

NIOSH looks forward to participating with MSHA in the planning and resolution of issues arising from the Technical Report, pursuant to Section IV (2) of the Memorandum of Understanding, by providing appropriate user notices for mine users and other users and considering other appropriate joint actions.

Sincerely,

John Howard  
Director

Enclosure